

REMARKS

Reconsideration of the application as amended is respectfully requested.

Claims 1, 3, 6, 7, and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by a document by Tanaka Denshi Kogyo KK entitled Insulation Coated Boning Wire ("Kogyo").

Claim 12 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,084,295 of Horiuchi et al. ("Horiuchi")

Claims 1-3, 5-7, 15, 16, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horiuchi in view of Kogyo.

Claims 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horiuchi.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Horiuchi in view of Japanese patent document number 11067812 of Uno et al. ("Uno").

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Horiuchi in view of Kogyo and further in view of U.S. Patent No. 5,422,435 of Takiar et al. ("Takiar").

Claims 2 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogyo in view of a document by Harper entitled Electronic Packaging and Interconnection Handbook ("Harper").

Claims 5 and 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogyo.

Claims 12 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogyo in view of U.S. Patent No. 5,798,667 of Herbert ("Herbert").

Claims 14 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogyo in view of Uno.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogyo in view of Takiar.

Claims 1-3, 5-10, 12, and 14-18 have been canceled without prejudice. New claims 28-47 have been added. It is respectfully submitted that the amendments are supported by the specification and drawings and do not add new matter. Applicant reserves all rights with respect to the applicability of the doctrine of equivalents.

Applicant respectfully submits that new claim 28 is not obvious under 35 U.S.C. § 103(a) in view of Horiuchi, Kogyo, and Takiar. Applicant also respectfully submits that new claim 28 is not obvious under 35 U.S.C. § 103(a) in view of Kogyo and Takiar.

New claim 28 includes the following limitations:

- a first integrated circuit;
- a second integrated circuit residing on top of the first integrated circuit;
- a first insulated bond wire connecting the first integrated circuit to the second integrated circuit;
- a second insulated bond wire connecting the first integrated circuit to the second integrated circuit.

(New claim 28).

Applicant respectfully submits that Kogyo, Takiar, and/or Horiuchi do not teach or suggest a combination with each other. Applicant submits that it would be impermissible hindsight, based on applicant's own disclosure, to combine Horiuchi, Kogyo, and Takiar, or Kogyo and Takiar.

As the Examiner has stated, Horiuchi in view of Kogyo does not disclose a second integrated circuit. Applicant respectfully submits, however, that Takiar teaches away from a combination with Kogyo and/or Horiuchi and teaches away from new claim 28. Takiar does not disclose insulated wire bonds for the Takiar stacked multi-chip modules and Takiar includes the following discussion:

The side-by-side MCM, however, suffers from a number of disadvantages. Laying out the dice side by side on the principal mounting surface within a molded plastic package or a cavity package is not the most optimal way to use package real estate. Such real estate is preciously limited since, in most cases, the dice have to fit within some standard form factor previously designed for only one die. If the dice are not properly laid out, the real estate restriction will limit the number of dice that can be incorporated into the MCM. Furthermore, unoptimized dice layout yields correspondingly unoptimized wire bonding resulting in wire cross over, long wire lengths and small wire-to-wire separation. Wire cross over, where one wire loops over another wire, is highly undesirable because shorting may occur as a result of molding conditions. Similarly, long wire lengths and small wire-to-wire separation can post high risks for wire sweep under fast mold transfer conditions or high resin viscosity.

(Takiar Col. 2, lines 28-46) (emphasis added).

Given that new claims 29-38 depend directly or indirectly from new claim 28, applicant respectfully submits that new claims 29-38 are patentable over Horiuchi, Kogyo, and Takair, or over Kogyo and Takiar.

Applicant respectfully submits that new claim 39 is not obvious under 35 U.S.C. § 103(a) in view of Horiuchi, Kogyo, and Takiar, or in view of Kogyo and Takiar. New claim 39 refers to "a plurality of stacked integrated circuits." For reasons similar to

those expressed with respect to new claim 28, applicant submits that Takiar teaches away from a combination with Kogyo and/or Horiuchi and teaches away from new claim 39. As stated above, applicant submits that Kogyo, Takiar, and/or Horiuchi do not teach or suggest a combination with each other.

Given that new claims 40-44 depend from new claim 39, applicant respectfully submits that new claim 39 is patentable over Horiuchi, Kogyo, and Takiar, or over Kogyo and Takiar.

Applicant respectfully submits that new claim 45 is not obvious under 35 U.S.C. § 103(a) in view of Horiuchi, Kogyo, and Takiar, or in view of Kogyo and Takiar. New claim 45 reads as follows:

45. (New) An apparatus comprising:
a first integrated circuit;
a second integrated circuit residing on top of the first integrated circuit;
an insulated bond wire connecting the first integrated circuit to the second integrated circuit;
an uninsulated bond wire connecting the first integrated circuit to the second integrated circuit.

(New claim 45).

As stated above, applicant submits that Kogyo, Takiar, and/or Horiuchi do not teach or suggest a combination with each other. As stated above, applicant submits that it would be impermissible hindsight, based on applicant's own disclosure, to combine Horiuchi, Kogyo and Takiar or Kogyo and Takiar.

Applicant also submits that even if such a combination were made, the combination of those references would lack a combination of an insulated bond wire and an uninsulated bond wire as recited in new claim 45.

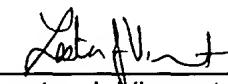
Given that new claims 46 and 47 depend from new claim 45, applicant respectfully submits that new claims 46 and 47 are patentable over Horiuchi, Kogyo, and Takiar, or over Kogyo and Takiar.

If there are any charges not covered by any check submitted, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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